LAPORAN TUGAS PEMROGRAMAN BERBASIS FRAMEWORK
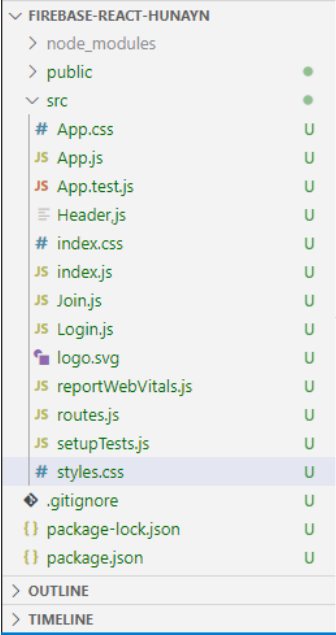
Modul 10
Firebase ReactJS

Disusun Oleh :

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Praktikum – Bagian 1: Firebase Setup

Langkah	Keterangan
1	Buatlah project react pada directory yang baru.

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek> npx create-react-app firebase-react-hunayn

Creating a new React app in D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

> core-js@2.6.12 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn\node_modules\babel-runtime\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"

> core-js@3.10.1 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"
```

```
  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd firebase-react-hunayn
  npm start

Happy hacking!
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek>
```

Setelah itu pada folder src buatlah file dengan nama index.js ; Login.js ; Join.js ; Header.js ; routes.js ; styles.css (file lain yang ada di folder src bisa dihapus saja).

```
∨ FIREBASE-REACT-HUNAYN
  > node_modules
  > public                    •
  ∨ src                       •
    # App.css                 U
    JS App.js                 U
    JS App.test.js            U
    ≡ Header.js               U
    # index.css               U
    JS index.js               U
    JS Join.js                U
    JS Login.js               U
    🔧 logo.svg               U
    JS reportWebVitals.js     U
    JS routes.js              U
    JS setupTests.js          U
    # styles.css              U
  ◆ .gitignore                U
  {} package-lock.json        U
  {} package.json             U
  > OUTLINE
  > TIMELINE
```

Karena pada praktikum ini kita menggunakan react router dom, maka lakukan npm install react-router-dom dahulu.

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn> npm install react-router-dom
npm WARN @babel/plugin-bugfix-v8-spread-parameters-in-optional-chaining@7.13.12 requires a peer of @babel/core@^7.13.0 but none is installed. You
must install peer dependencies yourself.
npm WARN tsutils@3.21.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >
= 3.6.0-beta || >= 3.7.0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32"
,"arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})

+ react-router-dom@5.2.0
added 11 packages from 6 contributors and audited 1963 packages in 22.626s

135 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn> []
```

Jika sudah, isilah code seperti dibawah ini sesuai dengan nama file masing-masing.

index.js

```
src > JS index.js > ...
  1  import React, { useState } from "react";
  2  import ReactDOM from "react-dom";
  3  import { Switch, BrowserRouter as Router, Route } from "react-router-dom";
  4  import "./styles.css";
  5
  6  export const AuthContext = React.createContext(null);
  7
  8  function App() {
  9    const [isLoggedIn, setLoggedIn] = useState(false);
 10
 11    return (
 12      <AuthContext.Provider value={{ isLoggedIn, setLoggedIn }}>
 13        Is logged in? {JSON.stringify(isLoggedIn)}
 14        <div className="App">
 15          <Router>
 16            <Header />
 17            <Switch>
 18              {routes.map((route) => (
 19                <Route
 20                  key={route.path}
 21                  path={route.path}
 22                  exact={route.exact}
 23                  component={route.main}
 24                />
 25              ))}
 26            </Switch>
```

```
 24                />
 25              ))}
 26            </Switch>
 27          </Router>
 28        </div>
 29      </AuthContext.Provider>
 30    );
 31  }
 32
 33  const rootElement = document.getElementById("root");
 34  ReactDOM.render(<App />, rootElement);
 35
```

Login.js

```
src > JS Login.js > [@] Login
 1  import React, { useState, useContext } from "react";
 2  import { AuthContext } from "./index";
 3
 4  const Login = () => {
 5    const [email, setEmail] = useState("");
 6    const [password, setPassword] = useState("");
 7    const [error, setErrors] = useState("");
 8
 9    const Auth = useContext(AuthContext);
10    const handleForm = (e) => {
11      e.preventDefault();
12      console.log(Auth);
13      Auth.setLoggedIn(true);
14    };
15
16    return (
17      <div>
18        <h1>Login</h1>
19        <form onSubmit={(e) => handleForm(e)}>
20          <input
21            value={email}
22            onChange={(e) => setEmail(e.target.value)}
23            name="email"
24            type="email"
25            placeholder="email"
26          />
```

Join.js

```
src > JS Join.js > ...
 1  import React, { useState, useContext } from "react";
 2  import { AuthContext } from "./index";
 3
 4  const Join = () => {
 5    const [email, setEmail] = useState("");
 6    const [password, setPassword] = useState("");
 7    const [error, setErrors] = useState("");
 8
 9    const Auth = useContext(AuthContext);
10    const handleForm = (e) => {
11      e.preventDefault();
12      console.log(Auth);
13      Auth.setLoggedIn(true);
14    };
15
16    return (
17      <div>
18        <h1>Join</h1>
19        <form onSubmit={(e) => handleForm(e)}>
20          <input
21            value={email}
22            onChange={(e) => setEmail(e.target.value)}
23            name="email"
24            type="email"
25            placeholder="email"
26          />
```

```
26          />
27          <input
28            onChange={(e) => setPassword(e.target.value)}
29            name="password"
30            value={password}
31            type="password"
32            placeholder="password"
33          />
34          <hr />
35          <button class="googleBtn" type="button">
36            <img
37              src="https://upload.wikimedia.org/wikipedia/commons/5/53/Google_%22G%22_Logo.svg"
38              alt="logo"
39            />
40            Join With Google
41          </button>
42          <button type="submit">Login</button>
43          <span>{error}</span>
44        </form>
45      </div>
46    );
47  };
48
49  export default Join;
50
```

Header.js

```
src > JS Header.js > ...
1    import React from "react";
2    import routes from "./routes";
3    import { Link } from "react-router-dom";
4
5    const Header = () => (
6      <ul className="nav">
7        {routes.map((route, i) => (
8          <li key={i}>
9            <Link to={route.path}>{route.name}</Link>
10         </li>
11       ))}
12     </ul>
13   );
14
15   export default Header;
16   |
```

routes.js

```
src > JS routes.js > [@] default
1    import React from "react";
2    import Login from "./Login";
3    import Join from "./Join";
4
5    const routes = [
6      { name: "Join", path: "/", exact: true, main: () => <Join /> },
7      { name: "Login", path: "/login", exact: true, main: () => <Login /> },
8    ];
9
10   export default routes;
11
```

styles.css

```
src > # styles.css > .nav li
1    .App {
2      font-family: sans-serif;
3      padding: 50px;
4    }
5
6    h1 {
7      margin: 0 0 25px 0;
8      text-align: left;
9    }
10
11   form {
12     display: flex;
13     flex-direction: column;
14   }
15
16   input {
17     max-width: 450px;
18     width: auto;
19     border: none;
20     margin: 0 0 25px 0;
21     box-shadow: 0 1px 3px ☐rgba(0, 0, 0, 0.12), 0 1px 2px ☐rgba(0, 0, 0, 0.24);
22     transition: all 0.3s cubic-bezier(0.25, 0.8, 0.25, 1);
23     padding: 10px;
24   }
25
26   button {
```

```css
26    button {
27      width: 125px;
28      box-shadow: 0 1px 3px ▢rgba(0, 0, 0, 0.12) 0 1px 2 px ▢rgba(0, 0, 0, 0.24);
29      border: none;
30      padding: 7px;
31      text-align: center;
32      cursor: pointer;
33    }
34
35    button[type="submit"] {
36      background-color: ■#4c566a;
37      color: ▢white;
38      font-size: 14px;
39      font-weight: 900;
40      border-radius: 5px;
41      text-transform: uppercase;
42      padding: 15px;
43    }
44
45    .googleBtn {
46      width: 225px;
47      margin: 0 0 50px 0;
48      display: flex;
49      justify-content: center;
50      font-size: 16px;
51    }
```

```css
51    }
52
53    .googleBtn img {
54      width: 16px;
55      height: 16px;
56      padding: 0;
57      margin: 0 5px;
58      vertical-align: middle;
59    }
60
61    .nav {
62      display: flex;
63      text-decoration: none;
64      list-style-type: none;
65      justify-content: flex-start;
66      margin: 0 0 50px;
67      padding: 0;
68    }
69
70    .nav li {
71      margin: 0 10px;
72    }
73
```

Kemudian buka https://console.firebase.google.com/ setelah itu buat project baru dengan nama project yang kalian inginkan.
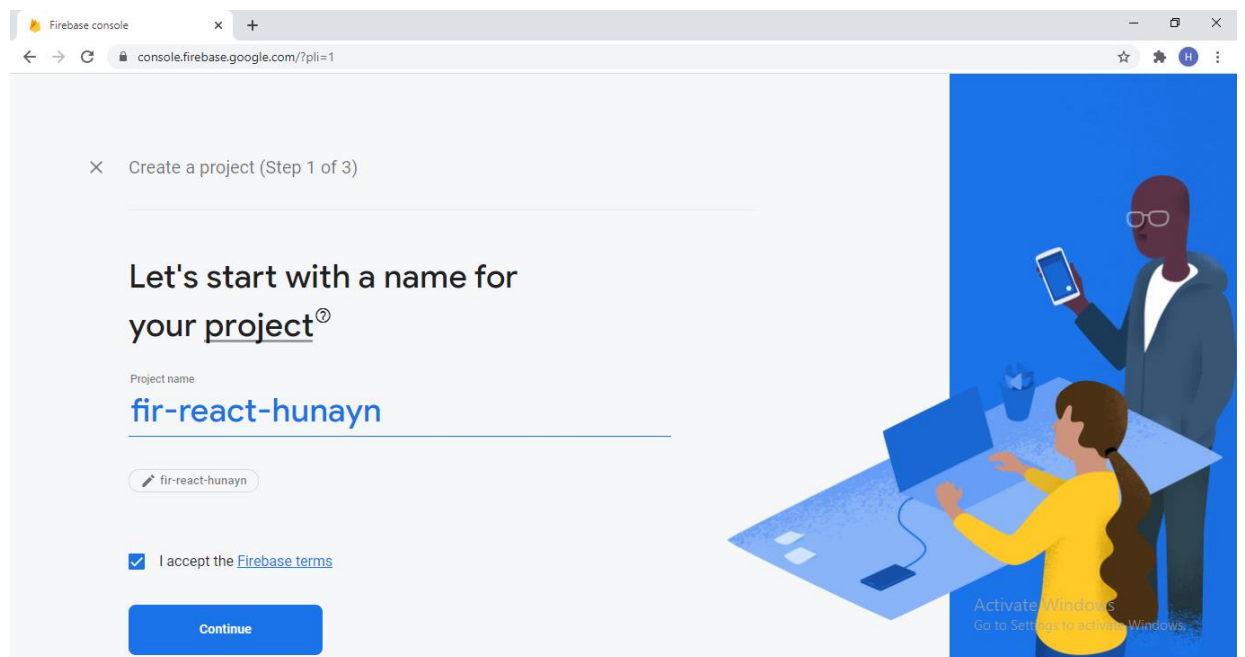
Pada cmd lakukan perintah npm install --save firebase di directory project react untuk menambahkan dependency firebase kedalam react kita.

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn> npm install --save firebase

> core-js@3.6.5 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn\node_modules\@fireba
se\polyfill\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"

Thank you for using core-js ( https://github.com/zloirock/core-js ) for polyfilling JavaScript standard library!

The project needs your help! Please consider supporting of core-js on Open Collective or Patreon:
> https://opencollective.com/core-js
> https://www.patreon.com/zloirock

Also, the author of core-js ( https://github.com/zloirock ) is looking for a good job -)

> protobufjs@6.10.2 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\10thWeek\firebase-react-hunayn\node_modules\pro
tobufjs
> node scripts/postinstall

npm WARN @babel/plugin-bugfix-v8-spread-parameters-in-optional-chaining@7.13.12 requires a peer of @babel/core@^7.13.0 but none is installed. You
```

Setelah itu lakukan setting pada project firebase yang kalian buat tadi agar react kalian dapat terhubung dengan firebase. Pada setting get started pilih yang untuk web.
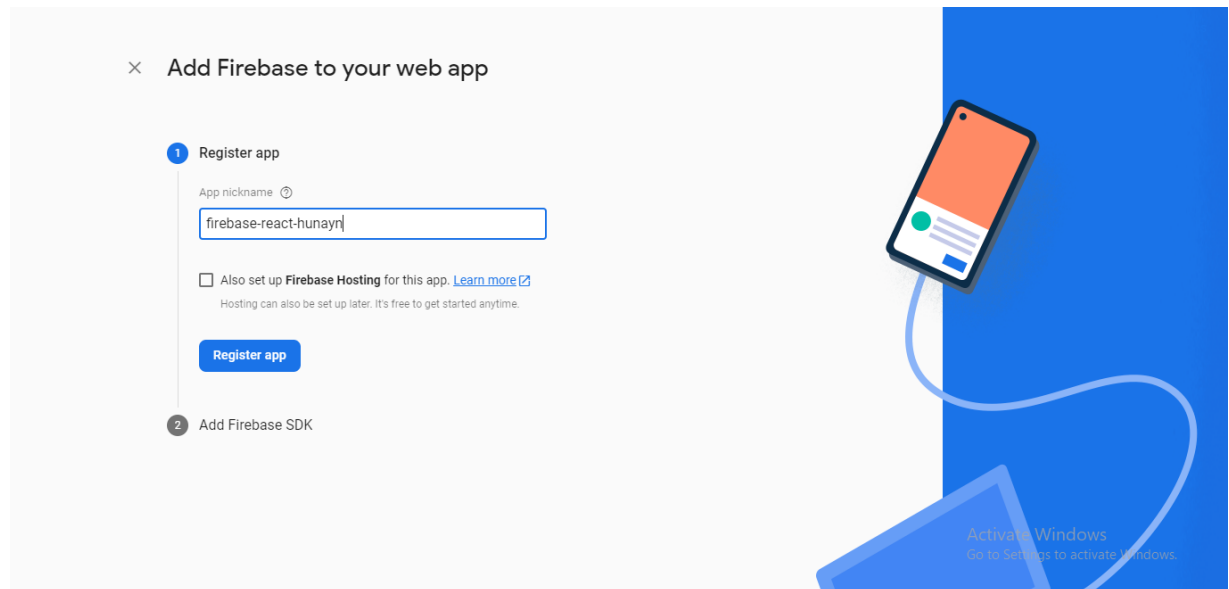
Lalu setelah itu anda akan mendapatkan script konfigurasi yang akan menjadi penghubung dengan project react anda. Salin script tersebut lalu tempel pada file baru di dalam folder src yang kita beri nama firebase.config.js (gambar dibawah adalah contoh, sesuaikan script yang anda dapat dari firebase).
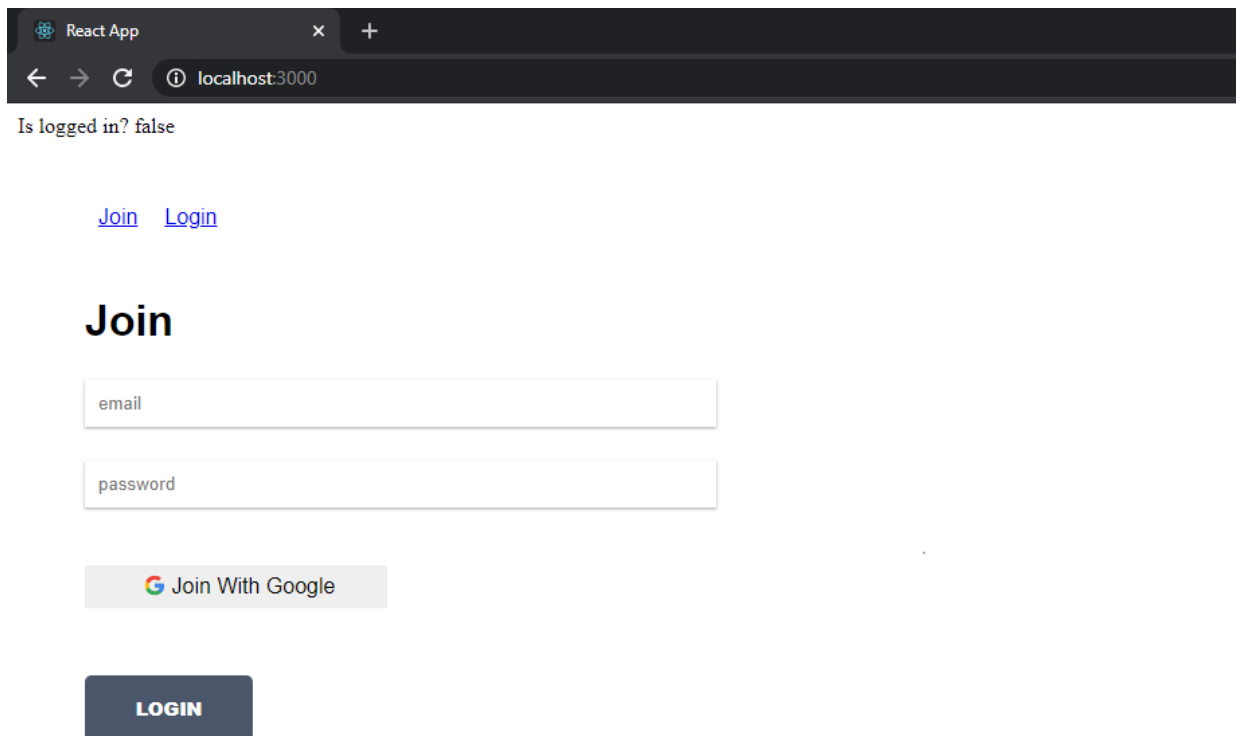
```
src > JS firebase.config.js > ...
  1   // Your web app's Firebase configuration
  2   // For Firebase JS SDK v7.20.0 and later, measurementId is optional
  3   var firebaseConfig = {
  4     apiKey: "AIzaSyAluVxKx0BTAvFEPZ4n6SJKQRmvP3qyr1E",
  5     authDomain: "fir-react-hunayn.firebaseapp.com",
  6     projectId: "fir-react-hunayn",
  7     storageBucket: "fir-react-hunayn.appspot.com",
  8     messagingSenderId: "460799444409",
  9     appId: "1:460799444409:web:875f84a081e538ce1c2268",
 10     measurementId: "G-X4EXCZZHJ0",
 11   };
 12
 13   export default firebaseConfig;
 14   |
```

Lalu lakukan inisialisasi firebase config dengan menambahkan code pada index.js seperti dibawah ini.

```
  1   import React, { useState } from "react";
  2   import ReactDOM from "react-dom";
  3   import { Switch, BrowserRouter as Router, Route } from "react-router-dom";
  4   import routes from "./routes.js";
  5   import Header from "./Header";
  6   import "./styles.css";
  7   import * as firebase from "firebase";
  8   import firebaseConfig from "firebase.config";
  9
 10   firebase.initializeApp(firebaseConfig)
 11
 12   export const AuthContext = React.createContext(null);
```

Jika sudah berhasil maka coba jalankan, jika tidak terdapat error maka project anda telah terhubung dengan firebase.

Selanjutnya aktifkan terlebih dahulu authentication email dan google pada firebase console.
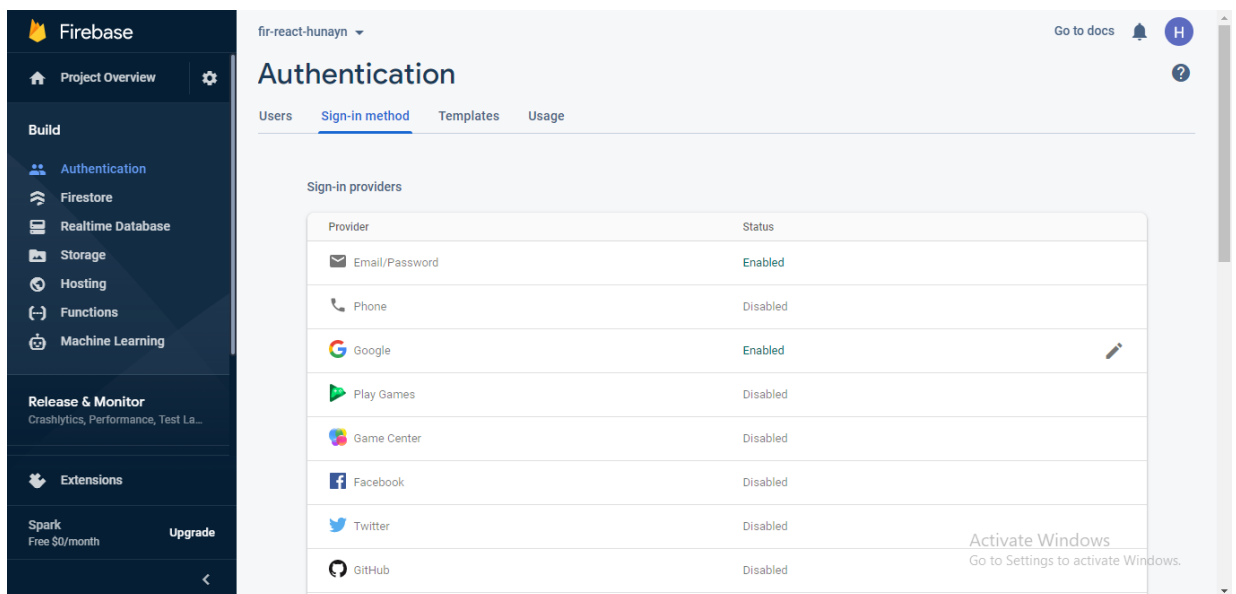
Jika sudah, lakukan edit code pada Join.js untuk membuat email dan password untuk user. Pertama import dahulu objek firebase agar bisa digunakan pada Join.js dengan code berikut.

```
src > JS Join.js > [∅] Join
  1   import React, { useState, useContext } from "react";
  2   import { AuthContext } from "./index";
  3   import firebase from "firebase";
  4
```

Kemudian cari method auth dan lakukan edit code seperti dibawah ini.

```
10      const Auth = useContext(AuthContext);
11      const handleForm = (e) => {
12        e.preventDefault();
13        firebase
14          .auth()
15          .createUserWithEmailAndPassword(email, password)
16          .then((res) => {
17            if (res.user) Auth.setLoggedIn(true);
18          })
19          .catch((e) => {
20            setErrors(e.message);
21          });
22
23      // console.log(Auth);
24      // Auth.setLoggedIn(true);
25    };
26
```

Silahkan coba pada aplikasi dengan klik join, lalu isikan email dan password. Coba cek pada firebase maka user telah terbuat seperti dibawah ini.

Is logged in? false

Join   Login

Join

1841720148@student.polinema.ac.id

•••••••••••

G Join With Google

JOIN
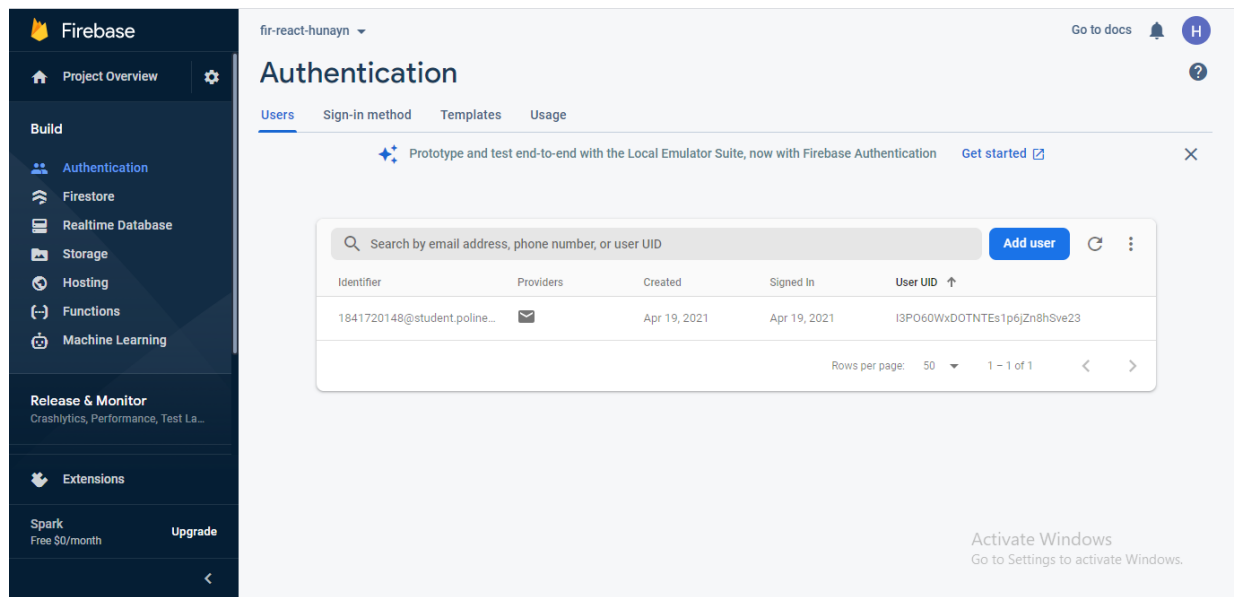
Langkah selanjutnya adalah bagaimana caranya agar kita dapat sign in/login dengan akun yang telah dibuat, yaitu dengan cara melakukan edit code pada Login.js. Pertama import dahulu objek firebase agar bisa digunakan pada Login.js dengan code berikut.

```
1   import React, { useState, useContext } from "react";
2   import { AuthContext } from "./index";
3   import firebase from "firebase";
4
```

Kemudian cari method auth dan lakukan edit code seperti dibawah ini.

```
10      const Auth = useContext(AuthContext);
11      const handleForm = (e) => {
12        e.preventDefault();
13        firebase
14          .auth()
15          .signInWithEmailAndPassword(email, password)
16          .then((res) => {
17            if (res.user) Auth.setLoggedIn(true);
18          })
19          .catch((e) => {
20            setErrors(e.message);
21          });
22      };
23
```

Silahkan coba pada aplikasi dengan cara klik login kemudian masukkan email dan password yang telah didaftarkan, kemudian perhatikan keterangan login pada pojok kiri atas dengan perubahan kondisi dari false menjadi true yang menandakan anda telah berhasil login.

Is logged in? false

Join   Login

Login

1841720148@student.polinema.ac.id

••••••••••••

G Login With Google

LOGIN

Menjadi

Is logged in? true

Join   Login

Login
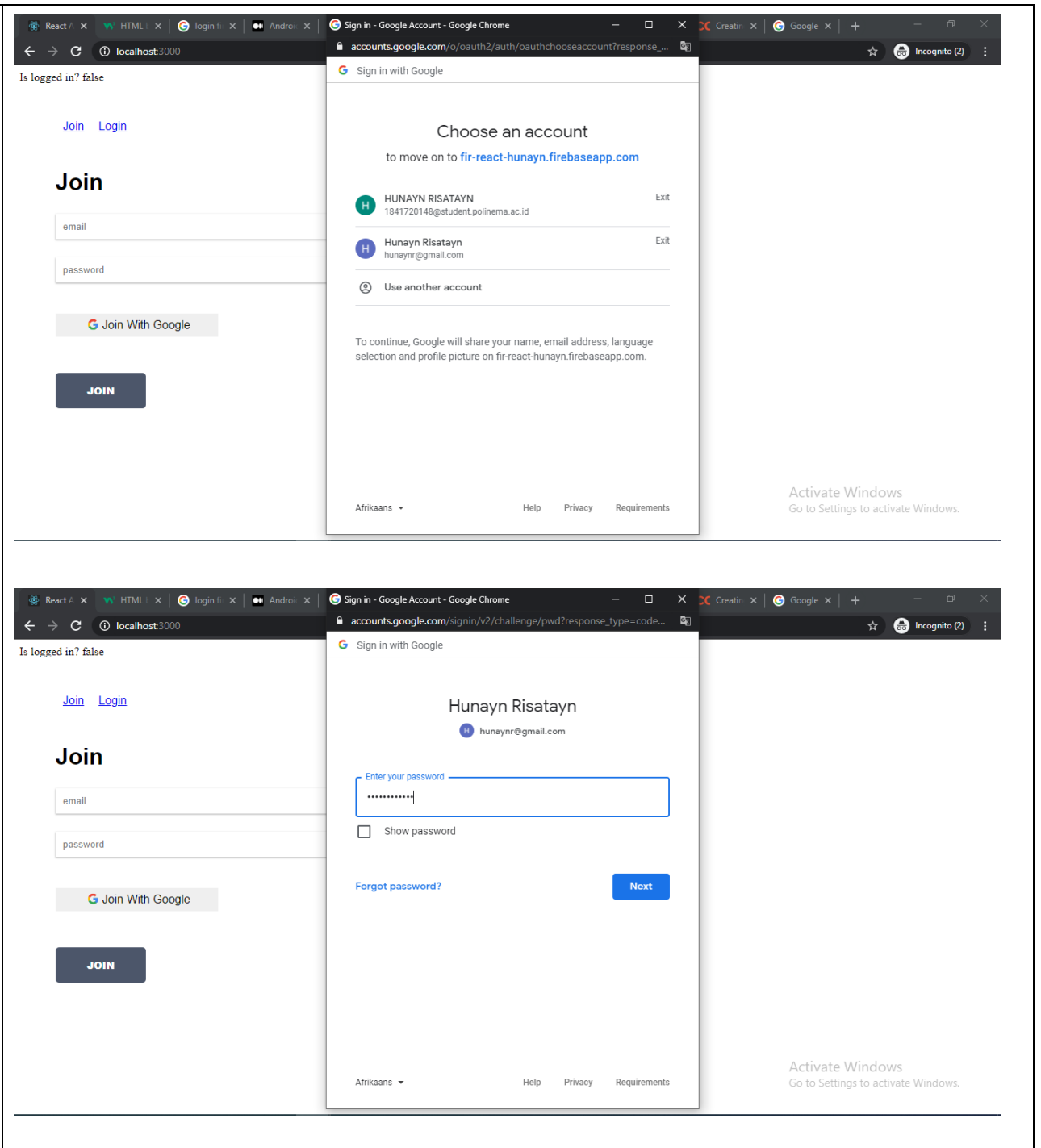
1841720148@student.polinema.ac.id

••••••••••••

G Login With Google

LOGIN

Soal Latihan Praktikum

Pada button join with google belum terdapat aksi, silahkan tambahkan function agar dapat mendaftar dengan cara klik button tersebut lalu memilih akun gmail yang akan dipakai.

Link GitHub : https://github.com/hunaynr/framework_prog/tree/main/10thWeek

Link Youtube : https://youtu.be/Q9OO_vpd1HU